

## CLAIMS

1. An actuator having the function of control of operation displacement, which comprises of cylinder 100 in which a working flow is supplied, one or more piston 160 reciprocally movable in the cylinder 100 to divide the inner space of cylinder 100 into the first space 101 and the second space 102, a rotating axis 140 rotatably mounted through the wall of the cylinder 100, a power transmission unit 120,130 connected between the piston 160 and the rotating axis 140 to transfer the reciprocating force of piston 160 to the rotating axis 140 and the flow pathways 11,12 connecting the first and the second space 101,102 to the exterior solenoid valve 20, and the rotating axis 140 could be rotated according to the action of solenoid valve 20, characterized in that the actuator further comprises of a magnet 231 provided on one side of the piston 160, a guide 211 provided on one side of the cylinder 100 in the reciprocal direction of the piston 160, a slider 213 being guided by the guide 211 and moving reciprocally along the piston 160, a working rod 233 extending from one side of the slider 213 toward the center of the cylinder 100, a magnetic sensor 235 provided on the working rod 233 and being adjacent to the wall of the cylinder 100, the magnetic sensor 235 being capable of sending a signal to the solenoid valve 20 if the magnet 231 is sensed, and a action range setting means 219;221 having the scale representing displacement of the magnetic sensor 235.

2. An actuator of claim 1, wherein a slide hole 211a is formed in the longitudinal direction on the center of the guide 211, and a reciprocating rod 217 is inserted on the slide hole 211a to move the piston 160 reciprocally.

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3. An actuator having the function of control of operation displacement, which comprises of cylinder 100 in which a working flow is supplied, one or more piston 160 reciprocally movable in the cylinder 100 to divide the inner space of cylinder 100  
10 into the first space 101 and the second space 102, a rotating axis 140 rotatably mounted through the wall of the cylinder 100, a power transmission unit 120,130 connected between the piston 160 and the rotating axis 140 to transfer the reciprocating force of piston 160 to the rotating axis 140 and the flow pathways  
15 11,12 connecting the first and the second space 101,102 to the exterior solenoid valve 20, and the rotating axis 140 could be rotated according to the action of solenoid valve 20, characterized in that the actuator further comprises of a magnet  
20 231 provided on one side of the piston 160, a guide 211 provided on one side of the cylinder 100 vertically to reciprocal direction of the piston 160, a slider 213 being guided by the guide 211 and moving vertically to the reciprocal direction of the piston 160, a sliding plate 241 provided outside of the cylinder 100 and being movable along the reciprocating piston 160 and having  
25 an inclined slot 243 by which the guide 211 is engaged, a magnetic sensor 235 provided on one side of the sliding plate 241 and

being adjacent to the wall of the cylinder 100, the magnetic sensor 235 being capable of sending a signal to the solenoid valve 20 if the magnet 231 is sensed, and a action range setting means 219, 221 having the scale representing displacement of the 5 magnetic sensor 235, and sliding plate 241 is slid along the reciprocal direction of the piston 160 as the slider 213 moves vertically.

4. An actuator of claim 3 a slide hole 211a is formed in 10 the longitudinal direction on the center of the guide 211, and a reciprocating rod 217 is inserted on the slide hole 211a to move the piston 160 reciprocally.